## REMARKS

Reconsideration of this application as amended is respectfully requested.

In the Office Action, claims 1-9, 37-53, and 92-96 were pending. Claims 1-9 and 37-53 were rejected and claim 95 was objected to. In this response, claims 1, 4, 7, and 95 have been amended to particularly point out and distinctly claim, in full, clear, concise, and exact terms, the subject matter which Applicant regards as his invention. Applicants reserve all rights with respect to the applicability of the doctrine of equivalents. Claims 97-106 have been added. No new matter has been added by the new claims or the amendments. Thus, claims 1-9, 37-53, and 92-106 are pending.

Applicants acknowledge with appreciation the allowance of claims 92-94 and 96. With respect to the objection of claim 95, Applicants have amended the claim, as suggested by the Examiner, and submit that the claim is now in condition for allowance. The Applicants respectfully request withdrawal of the objection to claim 95. Furthermore, new claims 97-106 contain limitations similar to the allowed claims. Thus, the Applicants submit that claims 92-106 are in condition for allowance and such action is earnestly solicited.

The Examiner objected to informalities within the specification. In response, the Applicants have amended the specification accordingly. The amendments are supported in the specification as originally filed. However, with respect to paragraph 59, the Applicants submit that the paragraph is correct as currently written because for a block of size $MxN$, there are $MN$ possible labelings from $S \in \{1...J\}^{MxN}$. Thus, the Applicants respectfully request withdrawal of the objections to the specification.

The Examiner rejected claims 1, 3, 4, 6, 7, and 9 under 35 U.S.C. § 103(a) as being

unpatentable over "Fast Segmentation of the JPEG Compressed Documents," *Journal of*

*Electronic Imaging, Vol.7(2), April 1998* by Queiroz et al. (hereinafter "Queiroz") in view

of the JPEG 2000 Specification. The Applicants respectfully disagree with the rejection

because the references, alone or in combination, fail to describe each and every limitation

as claimed in claim 1, 3, 4, 6, 7, and 9.

With respect to amended claim 1, the Applicants claim "generating a granular

multi-scale entropy distribution using information obtained from a header of a compressed

bitstream; and applying one or more image processing operations based on the granular

multi-scale entropy distribution."

The JPEG 2000 Specification describes the format of an image bitstream. The

bitstream includes header bits and corresponding image description bits (Table 1,

Specification, Page 14). However, the specification merely describes the standard format

which is required to make a JPEG 2000 image bitstream compliant with standard.

Queiroz, on the other hand, describes a method for segmenting an image in the

JPEG format (Queiroz, sections 1.1 and 2.1). The segmentation technique calculates the

number of bits required to encode an 8x8 block of the original image in the compressed

domain (Queirox, section 3). However, the segmentation technique only operates on 8x8

blocks in the compressed image domain.

The Applicants respectfully submit that the references, alone or in combination,

fail to describe or suggest "generating a granular multi-scale entropy distribution."

Whereas the JPEG 2000 specification describes the required format of a JPEG 2000

bitstream, Queiroz describes a processing technique on 8x8 blocks of a JPEG bitstream

but only in the compressed image domain. However, merely processing data

corresponding to an 8x8 block of a JPEG, even if it is a JPEG 2000, in the compressed domain fails to describe "generating a granular multi-scale entropy distribution using information obtained from a header of a compressed bitstream; and applying one or more image processing operations based on the granular multi-scale entropy distribution," as claimed in amended claim 1.

Further one skilled in the art would not be motivated to combine Queiroz and the JPEG 2000 specification to solve the problem addressed by the Applicants. Queiroz explicitly states that the technique fails to be robust for low resolution documents and will fail if an image is below a minimum resolution (Queiroz, section 4.4). The JPEG 2000 format, however, provides a multi-scale bitstream format for representing an image at multiple scales, including very low resolution scales. The Applicants, however, claim "generating a granular multi-scale entropy distribution using information obtained from a header of a compressed bitstream; and applying one or more image processing operations based on the granular multi-scale entropy distribution." That is, the Applicants claim obtaining data about an image and processing an image in multiple resolution scales, including low resolution levels. Thus, Queiroz would be incompatible with multi-scale image processing techniques and teaches away from such a technique. As such, one skilled in the art would not be motivated to combine the references to address the problem of multi-scale image processing, as claimed.

Thus, the Applicants respectfully submit that claim 1 is not rendered obvious under 35 U.S.C. § 103(a) by Queiroz in view of the JPEG 2000 specification. Independent claims 4 and 7 contain similar language and features as claim 1. Therefore, for at least the same reasons, Applicants respectfully submit that claims 4 and 7 are not obvious under 35 U.S.C. § 103(a) over Quieroz in view of the JPEG 2000 specification. Further, claims 3,

6, and 9 depend from claims 1, 4, and 7 respectively, and include additional features and limitations. Thus, for at least the same reasons discussed above, claims 3, 6, 9 are also not rendered obvious under 35 U.S.C. § 103(a). The Applicants respectfully request withdrawal of the rejections.

The Examiner further rejected claims 2, 5, and 8 under 35 U.S.C. § 103(a) as being unpatentable over Queiroz in view of the JPEG 2000 specification, and further in view of WO 00/01153 Jändel et al. (hereinafter "Jändel"). The Applicants respectfully disagree with the rejections

As discussed above, Queiroz and the JPEG 2000 specification fail to describe or suggest "generating a granular multi-scale entropy distribution using information obtained from a header of a compressed bitstream; and applying one or more image processing operations based on the granular multi-scale entropy distribution," as claimed in independent claim 1, and similarly in claims 4 and 7. However, Jändel merely describes encoding and decoding selected regions of an image (Jändel, page 3, line 4 to page 4, line 10). As such Jändel also fails to describe or suggest the missing limitations discussed above.

Thus, the references alone, or in combination, fail to describe or suggest each and every element as claimed in claims 1, 4, and 7. Claims 2, 5, and 8 depend from claims 1, 4, and 7, and claim additional features and limitations to. Therefore, for at least the same reasons, claims 2, 5, and 8 are not rendered obvious under 35 U.S.C. § 103(a) over Queiroz, the JPEG 2000 specification, and Jändel. The Applicants respectfully request withdrawal of the rejections.

The Examiner further rejected claims 37-44 and 45-53 for reasons similar to the rejection of claim 2. However, as discussed above, the Applicants submit that claim 2 is

not rendered obvious in view of the references cited. Thus, for at least the reasons discussed above, the Applicants submit that claims 37-44 and 45-53 have overcome the applicable rejections under 35 U.S.C. § 103. The Applicants respectfully request withdrawal of the rejections.

## CONCLUSION

In view of the foregoing, Applicant respectfully submits that applicable rejections and objections have been overcome.

Please charge Deposit Account No. 02-2666 for any shortage of fees in connection with this response.

Respectfully submitted,
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